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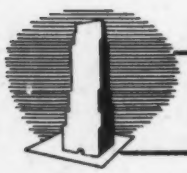

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The JOURNAL *of* GEOGRAPHY

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Dr. Edwards has taught geography and history for the past 16 years in the Roxbury School at Johnstown, Pennsylvania. Previous articles published in the JOURNAL are "Teaching the Geography of Australia thru Maps" in November, 1947 and "Verbalism Looms" in the April, 1950 issue. This manuscript is based on research done for his doctorate dissertation in education at the University of Pittsburgh.

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Miss Pace has many years of experience teaching in the primary grades, and during recent years has been busy developing activities for the first grade level. A recent article by her in the JOURNAL is "A Miniature Rock Garden: A First Grade Project" in the February, 1953 issue.

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Dr. Alfred H. Meyer is head of the Department of Geography and Geology, Valparaiso University. He has been teaching at Valparaiso University since 1929. He has been summer school guest lecturer at nine different universities during the past 12 years. The most recent universities where he has taught include the universities of California, Virginia, Washington (St. Louis), Columbia and Minnesota. He is well known for his work in the National Council of Geography Teachers and for his publications in various state and national scientific and educational magazines.

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Miss Downey is a teacher of geography at Grant Junior High School, Steubenville, Ohio. She served as an exchange teacher in geography, 1950-1951 in Pates Grammar School for Girls, Cheltenham, Gloucestershire.

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Dr. Griffin is assistant professor at Stanford University. A recent article by Dr. Griffin in the JOURNAL entitled "Secondary School Geography and the Needs of Our Times" appeared in the February, 1953 issue.

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Dr. Stone did his university work in Germany and Switzerland and is now teaching at Long Beach City College, Long Beach, California. During the war he served overseas in the United States Army Intelligence in Europe. A former article by Dr. Stone entitled "Western Germany" appeared in the February, 1950 issue of the JOURNAL OF GEOGRAPHY.

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VOLUME LII APRIL, 1953 NUMBER 4

HOW WELL ARE INTERMEDIATE CHILDREN ORIENTED IN SPACE?

JOHN HAYES EDWARDS
Roxbury School, Johnstown, Pa.

The aspects of space with which we are concerned in geography differ from those which engage the attention of philosophers, geometricians, theologians and astronomers. Studies of the young child's gradual orientation in space are of much interest and show a refreshing variety. The older child's ability to orient himself in his world has received a measure of attention, too, as manifested in the studies of Gesell,[1] Lord,[2] Jones,[3] Hall,[4] Swineford[5] and others.

This writer is concerned with the ability of children in the intermediate grades of the elementary schools to cope with the aspects of space which are taught specifically in geography classes. The beginning point, therefore, would naturally be: "What are the aspects of space which are taught in geography classes in the intermediate grades of the elementary school?"

In order to find out, a careful study of four nationally used series of texts disclosed thousands of space items centered around: 1. the cardinal points of the compass, 2. latitude, 3. longitude, 4. altitude, 5. horizontal distances and 6. area. As a further check,

[1] Arnold Gesell and Frances L. Ilg. *The Child from Five to Ten* (New York: Harper and Brothers Publishers, 1946).

[2] Francis Everette Lord, "The Ability to Make Geographical Uses of the Ideas of Longitude and Latitude" (Unpublished Master's thesis, University of Chicago, Chicago, 1926).

[3] Janet F. Jones, "Children's Concepts of Indefinite Quantitative Statements Used in Geography" (Unpublished Master's thesis, Iowa State University, Iowa City, Iowa, 1940).

[4] Elizabeth Shields Hall, "A Comparison of the Size and Space Concepts of Blind and Sighted School Children" (Unpublished Master's thesis, University of Oregon, Eugene, Oregon, 1938).

[5] Frances Swineford, "The Nature of the General, Verbal, and Spatial Bi-Factors" (Unpublished Doctor's dissertation, University of Chicago, Chicago, 1946).

14 standardized tests, dealing with geography or social studies in the elementary school, were examined to determine what space items were being tested. These sources furnished categories for a tabulation of items which might be tested to discover the extent to which the children were successful in learning what was presented to them.

The lengthy tabulation showed some space items which were presented unanimously in books for a particular grade, or in three of the four textbooks for the grade, and which, therefore, could be tested. The decision to test only items meeting the above criterion was reached for two reasons: 1. to keep the test from becoming cumbersome in length and 2. to insure equal opportunity to the children who would take the test.

For the form of the test, the multiple choice type item was selected as the most desirable. As has been stated, "It is readily adaptable to the measurement of discriminative power, inferential reasoning, interpretative ability, reasoned understanding, generalizing ability, and other types of outcomes deriving from the pupil's ability to apply and use facts."[6]

The language used for the questions was chosen from the first one thousand words of Thorndike's list,[7] except in a few instances where that was impossible. It was hoped, in this way, to measure achievement in geographic space without regard for the child's ability in reading.

In its final form, the test consisted of 85 questions, numbered consecutively, with only initial instructions. There are no sharp divisions within the test because: 1. Labeling each test section might create doubt in the subject's mind as to whether to proceed or not and 2. Some of the items in sections like "Latitude" are included in a few texts altho that term is not used in connection with them.

CARDINAL POINTS

There were 33 items based on the cardinal points of the compass which met the criterion of being mentioned by all or three of the texts for a particular grade. Those items are shown in Table I.

For those items, a simple outline of Pennsylvania was used,

[6] Harry A. Greene, Albert N. Jorgensen, and J. Raymond Gerberich, *Measurement and Evaluation in the Elementary School* (New York: Longmans, Green and Company, 1942).

[7] Edward L. Thorndike, *A Teacher's Word Book of the Twenty Thousand Words* (New York: Bureau of Publications, Teachers College, Columbia University, 1932).

TABLE I

ITEMS CONCERNED WITH THE CARDINAL POINTS OF THE COMPASS AND ACHIEVEMENT THEREIN BY 150 CHILDREN IN EACH OF THE INTERMEDIATE GRADES

Item	Texts Using	Frequencies	Grade 4	Grade 5	Grade 6
South	12	2505	122	114	140
North	12	2463	113	110	129
Southern	12	1546	122	125	145
West	12	1429	98	100	139
Western	12	1295	111	110	141
East	12	1254	103	100	135
Northern	12	1220	110	110	137
Eastern	12	998	92	99	138
Central	12	850	71	90	99
Southeastern	12	313	93	91	136
Middle	12	211	122	123	136
Northwest	12	187	91	99	134
Northeast	12	183	79	86	128
Southwest	12	170	71	80	123
Southward	12	145	120	114	138
Northward	12	120	99	95	133
Eastward	12	114	98	95	107
Southwestern	11	218	91	95	135
Southeast	11	210	77	82	118
Northeastern	11	202	78	85	135
Center	11	117	116	130	134
Northwestern	11	116	83	79	135
Westward	10	145	95	95	133
Southernmost*	8	35	115	125	141
North-south*	8	21	109	128	130
East-west*	7	28	94	94	107
Northernmost*	7	26	116	112	141
Easternmost*	7	17	100	101	141
North central‡	6	88	67	44	79
Westernmost*	6	16	99	102	134
Westerly†	5	38	94	97	132
Northeastward†	4	11	85	85	125
Southwestward†	4	7	81	88	121

* Meets criterion for testing only in Grades 5 and 6.
† Meets criterion for testing only in Grade 6.
‡ Meets criterion for testing only in Grade 5.

with letters in the four corners and center, and five numbers. The map was repeated three times to make it unnecessary to turn back for reference and to avoid errors resulting from such turning back.

Five different formulations of statements were devised; they were dictated by necessity and by a desire to avoid tedious repetition. The following example, with a different test item, could be used nine times.

1. The letters in the northern part of the map are

A and C ( )
C and D ( )
E and D ( )
A and B ( )
B and C ( )

For words like "north," "south," "east" and others, a second form was used eight times:

13. If an airplane flew from A to C, it would be flying

south ( )
east ( )
west ( )
north ( )
northeast ( )

For the space items "east-west" and "north-south," a third formulation was constructed:

29. If a road were built from C to D, it would run

northeast ( )
southwest ( )
west ( )
south ( )
east-west ( )

In four instances, it was found necessary to substitute the word "number" for "letter," as in:

2. The number nearest the center of the map is

1 ( )
2 ( )
3 ( )
4 ( )
5 ( )

The fifth construction, used twice to avoid unwelcome repetition, was:

19. An airplane flying from B to A would be flying

eastward ( )
westward ( )
northward ( )
southward ( )
northeast ( )

Table I is interpreted in this manner: The space item "south" was included in all 12 texts of the survey, appearing 2505 times therein. The question involving that particular item was answered correctly by 122 of the 150 fourth-grade children tested, 114 of the 150 fifth-grade children tested, and by 140 of the sixth-grade children tested. Each line of the table is read in the same way.

LATITUDE

The second part of the test, dealing with latitude, consisted of 17 questions. These were based on a map of the western hemisphere, which was repeated three times to avoid turning back for reference. In these questions, one construction could be used five times:

37. The number 3 is at

40° north latitude ( )
10° north latitude ( )
36° south latitude ( )
40° south latitude ( )
16° south latitude ( )

A second construction, also used five times, substituted the word "letter" for the word "number":

34. The letter E is near the

South Pole ( )
Equator ( )
North Pole ( )
Antarctic Circle ( )
Tropic of Capricorn ( )

A third formulation, with slight variations, could be used three times:

35. North America is wholly within the

Northern Hemisphere ( )
Tropics ( )
Southern Hemisphere ( )
Arctic Circle ( )
Antarctic Circle ( )

Table II shows the items tested in this section and the children's achievement therein.

As in Table I, the first line means that the space item "Equator" is used in all 12 textbooks a total of 556 times. Of the 150 fourth-grade children tested on that item, 129 were able to respond correctly, while of the 150 fifth-grade children, 116 succeeded; of the 150 sixth-grade children, 127 answered correctly.

ALTITUDE

In the third section of the text, which dealt with altitude, a colored map mounted on a card was used. This map appeared in

TABLE II

ITEMS CONCERNED WITH LATITUDE AND ACHIEVEMENT THEREIN BY 150 CHILDREN IN EACH OF THE INTERMEDIATE GRADES

Item	Texts Using	Frequencies	Grade 4	Grade 5	Grade 6
Equator	12	556	129	116	127
North Pole	12	169	132	135	141
South Pole	10	84	115	122	125
Southern Hemisphere*	9	75	83	84	69
Tropic of Capricorn*	9	72	113	86	115
Northern Hemisphere*	8	56	108	120	124
Tropic of Cancer*	7	75	120	83	107
The Tropic*	7	60	82	81	118
40° North Latitude*	7	41	95	125	140
30° North Latitude†	6	28	105	111	138
East-West Lines	6	26	84	99	118
30° South Latitude*	5	8	113	119	128
49° North Latitude*	5	6	78	101	132
High Latitude†	4	17	46	33	56
10° North Latitude†	4	6	111	119	141
36° North Latitude†	3	4	57	80	131
North-south Lines‡	6	16	79	69	99

* Meets criterion for testing only in Grades 5 and 6.
† Meets criterion for testing only in Grade 6.
‡ Item concerning longitude.

one of the texts used in the tabulation and was similar to those used in others. The numbers involved in the questions were typed directly on the maps.

For these questions, the construction was identical, only the number and alternative answers being changed.

51. How high is the land around the number 4?

2,000 to 3,000 feet ( )
5,000 to 10,000 feet ( )
500 to 1,000 feet ( )
1,000 to 2,000 feet ( )
more than 10,000 feet ( )

TABLE III

ITEMS CONCERNED WITH ALTITUDE AND ACHIEVEMENT THEREIN BY 150 CHILDREN IN EACH OF THE INTERMEDIATE GRADES

Item	Texts Using	Frequencies	Grade 4	Grade 5	Grade 6
More than 10,000′*	9	75	45	52	93
5,000 to 10,000′	9	68	110	127	133
2,000 to 2,500′	9	66	117	135	139
Sea level to 500′	9	31	117	114	140
1,000 to 2,000′	7	42	123	130	146
500 to 1,000′	6	33	81	101	129
Below sea level†	3	9	98	51	101

* No item in this table was included in three or four textbooks for Grade 4.
† Meets criterion for testing only in Grade 6.

Table III shows the items concerned with altitude that were tested and the achievement of the children in those items.

HORIZONTAL DISTANCES

Items dealing with horizontal distances were shown on a small scale map of the United States, which was repeated twice in the test. In order to emphasize the idea of measuring in a straight line, which the children are accustomed to doing in their estimations, the questions in this test section were worded identically:

58. What is the distance by airplane from A to G?

600 miles ( )
300 miles ( )
nearly 100 miles ( )
750 miles ( )
about 1,100 miles ( )

In each question, the letters were changed, as were the alternative answers.

Table IV records data similar to that shown in the preceding table.

TABLE IV

ITEMS CONCERNED WITH HORIZONTAL DISTANCES AND ACHIEVEMENT THEREIN BY 150 CHILDREN IN EACH OF THE INTERMEDIATE GRADES

Items	Texts Using	Frequencies	Grade 4	Grade 5	Grade 6
0 to 50 miles	12	225	86	83	121
50 to 100 miles	11	86	68	61	98
100 to 200 miles	11	76	62	66	103
1,000 to 2,000 miles	11	70	51	77	99
500 to 1,000 miles*	10	52	81	77	108
2,000 to 3,000 miles*	10	41	54	63	101
200 to 300 miles*	10	37	88	88	126
300 to 400 miles*	10	26	61	65	106
400 to 500 miles*	8	14	82	76	120

* Meets criterion for testing only in Grades 5 and 6.

AREA

The final portion of the test, which dealt with items related to area, involved the use of two different maps, each repeated twice on the test pages. The first map, a part of southeastern United States, was used to test items dealing with area expressed as a comparison. To assist the children in their estimates, the area of each state was given in square miles under the map.

The questions were phrased identically, only the letters and possible answers being changed:

67. Look at State G and State F. Which statement is best?

State G and State F are the same size. ( )
State G is larger than State F. ( )
State G is smaller than State F. ( )
State G is half as large as State F. ( )
State G is twice as large as State F. ( )

The 11 items tested in this part of the test are shown in Table V, as is achievement therein.

TABLE V

ITEMS CONCERNED WITH AREA EXPRESSED AS A COMPARISON AND ACHIEVEMENT THEREIN BY 150 CHILDREN IN EACH OF THE INTERMEDIATE GRADES

Items	Texts Using	Frequencies	Grade 4	Grade 5	Grade 6
Is larger than*	7	19	79	79	122
Is more than half of*	6	18	27	31	59
Is one-third as large as†	4	14	75	68	115
Is about the same size as†	4	14	87	98	130
Is about half of†	4	4	43	66	91
Is smaller than†	3	7	99	106	141
Is little larger than†	3	6	42	48	96
Is as large as†	3	5	52	47	87
Is more than twice as large as†	3	4	60	48	113
Is nearly half of†	3	3	47	51	90
Is less than half the size of†	3	3	106	104	139

* Meets criterion for testing only in Grades 5 and 6.
† Meets criterion for testing only in Grade 6.

The latter half of the final test section tested items dealing with area expressed as a fractional part of a political division. A map showing a section of north central United States was repeated twice for the eight questions. Each question was similar to this example:

78. What part of State D has been shaded?

the southern half ( )
the northern half ( )
the southern third ( )
the northern third ( )
the western half ( )

Table VI shows the final eight items tested and the children's achievement therein.

The percentage of achievement in each section of the test presents an interesting picture. As measured in the present study, the growth in orientation in space is not too marked between

TABLE VI

ITEMS CONCERNED WITH AREA EXPRESSED AS A FRACTIONAL PART OF A POLITICAL DIVISION AND ACHIEVEMENT THEREIN BY 150 CHILDREN IN EACH OF THE INTERMEDIATE GRADES

Item	Texts Using	Frequencies	Grade 4	Grade 5	Grade 6
One-fourth of*	4	14	45	44	105
One-third of	4	9	76	84	120
Three-fifths of	4	5	8	12	21
The southern half of	3	9	105	112	139
Three-fourths of	3	5	55	70	120
Two-thirds of	3	5	47	56	109
One-tenth of	3	5	83	74	124
One-fifth of	3	4	67	64	118

* Items in this table meet the criterion for testing in Grade 6 only.

fourth and fifth-grade children. Sixth-grade children, however, show marked growth, as is obvious in the following table.

TABLE VII

PER CENT OF ACHIEVEMENT IN EACH SECTION OF THE GEOGRAPHIC SPACE TEST IN EACH OF THE INTERMEDIATE GRADES

Test Section	Grade 4	Grade 5	Grade 6
Items concerned with the cardinal points of the compass	65	67	87
Items concerned with latitude	65	66	79
Items concerned with altitude	61	68	83
Items concerned with horizontal distances	47	49	73
Items concerned with area	42	44	67

Relative achievement by grades is also interesting from a slightly different viewpoint. On the basis of the textbook tabulation, on which the geographic space test was built, the maximum score for which the fourth grade children could be held responsible is thirty-two points, as that is the number of test items which were included in three or four of the textbooks investigated in the course of the present study. On the same basis, the maximum score for the fifth-grade children is sixty-one points and for sixth-grade

TABLE VIII

RANGE IN SCORE AND MEAN FOR EACH SCHOOL GRADE IN THE STUDY

Grade	L.S.	Mean	H.S.	Range	Expected Maximum	% Below E.M.
4	18	48.15	76	58	32	9
5	18	50.70	76	58	61	20
6	32	68.07	84	52	85	100

L.S.—Lowest Score.
H.S.—Highest Score.

children, eighty-five. Table VIII shows the range in score and the mean for each grade.

Table VIII is interpreted in this manner: In grade four, the lowest score was 18, the mean, 48.15, and the highest score 76. The range from highest to lowest score was 58 points. The expected maximum test score was 32 points, and only nine per cent of the children failed to achieve or exceed that score.

It is obvious, from the table, that 91 per cent of the children tested in the fourth grade achieved or exceeded the maximum score expected for that grade, and that 80 per cent of the children tested in fifth grade achieved or exceeded the maximum score for that grade. Similar information about sixth grade achievement cannot be drawn from the table. However, a count of the test papers of that grade shows that 81 per cent of the children in the sixth grade achieved or exceeded the expected maximum score for fifth grade. While this may seem to be comparable with the fifth grade achievement in the test, actually it is not. Two of the sixth-grade children missed a perfect score of 85 by only one point. Twenty-nine sixth-grade children scored above the highest fifth grade score. No child in grade six scored below 32 points, while the lowest fifth grade score was 18 points. Altogether, sixth grade test papers show considerable growth and improvement over those of the preceding grade.

FINDINGS

What credence may be placed in the above-discussed test results? Originally the questions in each part of the test were arranged according to the number of books using the item and the number of occurrences. The test was then administered to approximately 150 children in grades four, five and six. Thereafter, in each section of the test, the questions were ranked in order of difficulty. The test was then ready for administration to the groups of children who were to form the basis of the investigation.

We are justified in assuming validity for the geographic space test for the following reasons:

1. The items selected were based upon an outline approved by a group of judges who are experts in the field of geography education.[8] The outline itself was derived from a premilinary textbook investigation and from the author's 19 years of experience in teaching geography in the elementary school.

[8] Erna Grassmuck Gilland, Henry J. Warman, and Katheryne Thomas Whittemore.

2. Only items included in three or all four of the geography textbooks in the investigation were included in the test.
3. Test results for each section show a constant improvement from grade to grade.

To estimate the reliability of the geographic space test the Split-Half Method was used since, "The split-half method is generally regarded as the best of the methods for determining test reliability."[9] It was in preparation for this procedure that the test was first administered to a trial group of 150 children as the basis for determining the difficulty rank of questions. As Garrett states: "When items are in strict order of merit from least to most difficult, the split into odds and evens gives a unique determination of the reliability coefficient."[10]

The reliability coefficient of the half test was: $r = .9006$.

To estimate the reliability coefficient of the whole test, the Spearman-Brown Prophecy Formula was used. In this instance, the extended reliability coefficient proved to be .95, which may be considered to indicate a very high measure of reliability.

The index of reliability, which ". . . measures the trustworthiness of test scores by showing how well obtained scores agree with their theoretically true counterparts" and "gives the maximum correlation which the given test is capable of yielding"[11] was .97. This indicates that the test is an extremely good estimate of the function which is being measured.

The 450 children who participated in the investigation were enrolled in eight of the twenty-odd elementary schools of Johnstown, Pennsylvania. There were 221 boys and 229 girls. The children included representatives of two races and the varied nationality backgrounds found in cosmopolitan areas.

In chronological age, the children varied from nine years, one month to 15 years, eight months. In mental age, they varied from eight years, seven months to 15 years, four months, according to the *California Test of Mental Maturity.*[12] It was established by proper statistical procedure that the sample could be considered sufficiently large to be taken as descriptive of its population.

[9] Henry E. Garrett, *Statistics in Psychology and Education* (New York: Longmans, Green and Company, 1948, p. 383).

[10] *Ibid.*, p. 383.

[11] *Ibid.*, p. 391.

[12] Elizabeth T. Sullivan, Willis W. Clark, and Ernest W. Tiegs, *California Test of Mental Maturity,* Grades 4-5-6-7-8 (Los Angeles: California Test Bureau, 1951).

CONSTRUCTION ACTIVITY FOLLOWS FIRST GRADE GEOGRAPHY FIELD TRIP

ETHEL PACE
Parkview Central School, Bedford, Indiana

During a discussion period my first graders were talking about the different ways people in our community make a living. As would be expected in this locality of the "Nations Finest Building Stone," the limestone quarries and mills were suggested as places where many were employed. The children suggested that maybe we could go, as a class, to visit a quarry and a mill.

WE WRITE A LETTER

The class, as a group, composed a letter to Miss Riley, the Public Relations Director of the Indiana Limestone Company, asking her if she thought they were old enough to be taken on a tour of a quarry and a mill. Their letter explained that they were only six years old and were just first graders, but that they were most interested in seeing such an important kind of work. They assured her that she could depend on them to obey all safety rules, a very necessary factor for a trip of this kind. The children selected the child they thought had the best handwriting to copy the letter. In a few days they were really thrilled to receive a reply from Miss Riley. She told them that their request was the most interesting she had ever received and that she would be most happy to have them as her guests to visit a quarry and a mill. At the same time I received a letter from her suggesting specific plans for the trip.

PREPARATION FOR THE TRIP

Each child wrote a note to his parents asking permission to make the trip. If the parent was willing, the note was signed and returned to me. All parents were pleased with their children's opportunity to see this industry in action. A committee of children decided that four cars would take care of our number. Our principal, a former teacher who was much interested in our trip, our hostess and I had cars, so that problem was easily solved. At every opportunity the need for following safety regulations was stressed.

THE TRIP

Our tour first took us to a quarry just north of Oolitic which was approximately four miles from our school. There we saw the huge

ledges of limestone. Channeling machines were cutting thru the layers of stone. Large holes were made at the bottom of the cut (at regular intervals) with air hammers. The "wedge and feathers" were put in the large holes. Men passed by each wedge hitting it with a large hammer. This split the stone into layers. Great derricks lifted the large blocks of stone and placed them where they could be loaded on railroad cars or large trucks and taken to the mill. Stone not fit for milling was put in the quarry hole or on the grout pile. (Until the past few years there was much stone discarded as useless. Now most of it is fabricated and used for residence building).

After leaving the quarry we turned back toward Bedford and visited a mill just north of the city limits. In this large building we saw the rough stone just as it was brought in from the quarry. First we watched the gang saws cut it into slabs. Next, the diamond, or rip saws, cut it into required widths or lengths. The planers did all the straight cutting. Men with chisels did the cutting too intricate for the planers, such as curves, etc. Instead of derricks such as we had seen in the quarry we saw travelling cranes lifting the stone and putting it in the proper places. At our last stop in the mill we saw many beautiful finished carvings. The one of most interest to the children was that of "Steve Canyon" which was being completed while they watched and when finished was to be sent to Colorado to be put on a mountainside especially for the boys and girls of that state.

CONSTRUCTION OF A QUARRY AND A MILL

Soon after our trip, the group chose committees to plan for the quarry and mill we wanted to make. Each child had some part for which he was responsible, his preference, if possible. We used two long table tops, each about four feet by ten feet. On one end we constructed the quarry and on the other end, the mill. The space in between was "Highway 37" that connects the two places.

In the quarry we had piles of rough stone. For our quarry hole we used a dark blue kettle filled with water. Piles of rough stone were placed around the kettle to give it depth. We made channeling machines out of cardboard and tinker toys. Our large derrick was also made of tinker toys with the chain made of cord. This held the "largest possible" stone suspended above a truck. Quarry workers who were running machines and giving signals were really lead and metal soldiers dressed in art paper overalls and caps.

In one end of the mill were the rough blocks just as they had been brought from the quarry. Our gang saws and diamond saws were made of cardboard. Near them we had stacks of smooth stone. Cutters were working on various pieces of stone. One of the fathers made a soap carving of Steve Canyon on which the finishing touches were being placed by a "carver" with an air hammer (also made by an interested father) of wood with a tiny electric cord. A number of the children tried their hand at soap carving to represent the stone carvings they had seen.

Between the quarry and the mill we had a newsprint Highway 37. The hills and curves on the highway were marked almost exactly as they really are (omitting, of course, the town of Oolitic). No-passing lines were drawn at the needed places. The lines down the center of the highway were made with black crayon and the no-passing lines with yellow chalk. Trucks filled with stone were leaving the quarry. "Traffic" on this highway was quite heavy—trucks, cars, busses, etc., even a police car complete with red light and siren which gave chase to a car passing another in a "no-passing zone."

An electric train complete with track, signals, etc., carried stone by rail from the quarry to the mill. Open cars were loaded with stone. The track was laid so it would cross the highway just as it really does. (Quite a long line of highway traffic had to wait on the train.)

Other Activities

Back of our tables we had quite a large bulletin board with its space filled with articles and pictures describing the limestone industry. With post cards that had been given to us as souvenirs of the trip and some original stories by the group we made some interesting little booklets.

Our hostess for the tour loaned us the newest colored film made of the limestone industry. Children went to each room in our building to invite the children and teachers to be our guests for the movie. At our "Open House" we had many guests—mill and quarry workers and executives of the industry as well. Many of these were not patrons of our school but were interested in our project.

We wrote thank you notes to those who had helped us by using their cars and to the lady who had made such a worthwhile and enjoyable trip possible for us.

COLLEGE GEOGRAPHY AND COMMUNITY PLANNING

A Case Study in Applied Geography[1]

ALFRED H. MEYER
Valparaiso University

One of the most commonplace and challenging problems in organizing modern school curricula, whether on the elementary, secondary or college level, is to find an effective way in which geographic education can function academically, professionally and socially. Professional educators, school administrators, curriculum improvement committees and teacher-licensing agencies must recognize the fact that geographic offerings and teaching cannot be expected to yield professional results in the hands of non-geographically trained people any more than can the offerings and teaching of other disciplines be successful under similar unacademic and unprofessional circumstances.

On the other hand, geographers too must recognize the fact that geographic education basically depends upon its proper coordination with other areas of academic instruction and service to society if it is to function effectively.

This paper proposes to recount some experiences which illustrate how such a challenge has been met by projecting an undergraduate college geography curriculum into a program of local community planning.

Planning services and experiences of individual geographers as well as of departmental geographic organization will be cited to illustrate specifically in what various capacities geographers have contributed to a community planning program, and in what ways they in turn have been benefited by such experiences.

COMMUNITY PLANNING INTRINSICALLY A GEOGRAPHER'S PROJECT

First of all we submit that community planning presents intrinsically an ideal situation for applying geographic concepts to the investigation and evaluation of the affairs of everyday life. Academic participation in such a program provides the kind of behavior pattern of feeling, of thinking and of doing which educators recognize is necessary for achieving meaningful and fruitful experi-

[1] This paper is not intended primarily to report on basic research studies in planning, but rather to show how geographers can make a distinct and direct contribution to the educational, promotional and administrative phases of community planning.

ences on the part of the student. Moreover, this kind of coordinated school-community experience is rich in transfer values both in time and place. The civic consciousness it develops in our youth will unquestionably assert itself in later life thru active and intelligent participation in the affairs of their home community. The results of such purposeful citizenship training is bound to extend its values to regional, state and national levels as well, and thus help to provide the kind of education needed to make democracy function.

As some educator has expressed it: "Citizenship is not a thing to be memorized. It must be thought and lived."

Now, geography happens to be intrinsically a subject ideally adapted to this kind of thought-action program.

Planning, first of all, calls for an inventory of natural and human resources. This is a basic consideration of every conventional regional class and field study in college geography. To be most meaningful for planning purposes such resources must be expressed in locational or areal form rather than in statistical tabulations, since regions may have essentially the same content yet differ markedly in the way the component landscape phenomena are arranged. This is a basic geographic concept introduced at the very outset of the typical beginning courses in geography commonly known as Elements of Geography, or Principles of Geography, and is best expressed in the form of a map, the basic tool of the geographer as well as of the planner.

Before the professional planner is ready to suggest desirable land use patterns for residential, commercial, industrial and other functional development, the mapped criteria are studied to determine how they are really and functionally related to one another. This is the second basic concept developed in geography courses. Contrary to the amazingly erroneous impressions among non-geographers that geography is only concerned with location per se (a matter which, in our opinion, such a test as the one recently conducted by the *New York Times* does not help to dispel) geographers, like planners, are interested to see how poorly or how well the community functions in terms of its "actual" and "potential" natural and human resource patterns. To help find the answer to this question all kinds of correlations have to be noted between one set of geographic phenomena and another.

From the observation and mapping of natural and cultural phenomena and their correlation it should become obvious even

to the average citizen that if one is to deal rationally with a plan for the orderly growth of a community, particularly a complex urban area, then city "zoning" and planning are necessary. Now, in essence, both city zoning and planning are forms of "geographic regionalism." Both are based on the commonplace fact that the works of nature and the works of man differ from place to place and that whether there is a recognizable genetic basis for place to place differences or not, such differences must be recognized and areally differentiated on a functional, zonal or regional basis. Only in this way can we systematically strive towards the ideal of "find a place for everything and have everything in its place."

The "regional" technique of investigating the inter-regional as well as intra-regional relation of natural and human phenomena of areas is a distinctive contribution of geography to social science education. It is in the courses of Regional Geography that geographers explore and evaluate world realities of continent, of countries and of local communities.

From these observations it is thus easy to see how readily geographic understandings and skills lend themselves to the activation and development of a community planning program.

Application to an actual planning project will serve to illustrate just how geography and geographers can actually function in a planning program.

THE COMMUNITY AND INSTITUTIONAL SETTING

The community is Valparaiso, Indiana, a city of some 12,000 population. The planning jurisdictional area includes a two-mile fringe of "rurban" land beyond the city limits (Fig. 1). The city is near the crest of the Valparaiso moraine, about 15 miles south of the southern end of Lake Michigan and 50 miles southeast of Chicago. Regionally its economic interests are identified with the heavily industrialized Calumet district, and there is an active commuting service between Valparaiso and the Chicago metropolitan region (see shaded area west of the Lake-Porter county line). The city itself is primarily residential, but there are three rather unique industries of national prominence.

The institution providing geography staff and student participation in the planning project is Valparaiso University which has had a student enrollment in recent years of between 1500 and 2000. The offerings of the Department of Geography and Geology total 28 courses—all undergraduate. The staff consists of five instruc-

tors. Course registrations normally range between 450 and 550 per semester. In the last several years the number of students graduating with a major in geography averaged approximately 25 per year.

Students who participated in the planning activities were registered in one or another of the following geography courses: Geographic Planning, Rural Field Survey, Urban Field Survey and Geographic Problems.

The period of activities here related extends over a five-year period.

INTEREST IN COMMUNITY PLANNING AROUSED THRU A GEOGRAPHIC ADDRESS AND A "TOWN AND GOWN" PROJECT

Public interest in Valparaiso planning was activated by an address on the subject of "Geographical Aspects of Community Planning" delivered before the local Rotary Club on July 9, 1946. A large detail city map, 70″ × 70″ in color, prepared by the geography department during World War II as a part of a joint "town and gown" Civilian Defense Program, was used to point out the relevant utility of such a map for community planning purposes. Students in the class of Geographic Problems had assisted town air raid wardens in the mapping project. Because of its comprehensive coverage and clear legibility of urban phenomena, permitted by a very large scale (120 feet per inch), this map subsequently served as a sort of master exhibit at numerous public gatherings. Figure 2 illustrates its use at one of such meetings, Northwest Indiana Regional Planning Institute, sponsored jointly by the Indiana Economic Council, Valparaiso University and the local Chamber of Commerce.

Following the Rotary luncheon previously mentioned, several Rotarians at a curbstone conference suggested that the matter of community planning be given consideration by the City Chamber of Commerce. It was recommended to this body that a Citizens' Advisory Planning Council be established whose membership would consist of a delegate from practically each of the score of civic organizations in the community. The writer was asked to serve as its first president. Points of chief planning interest to the citizenry were developed in a series of town hall programs. These dealt with the various functional planning aspects of the community— residetntial, commercial, industrial and recreational—for each of which a qualified panel of speakers was selected. These panel programs

were followed in each case by an open forum which gave full opportunity for free expression of public sentiment on the desirable needs of the community. Specific recommendations for community improvements were formulated at the conclusion of the meetings. Finally, a resolution was adopted to urge the City Common Council to re-activate the City Plan Commission which in turn was to employ a professional planning consultant to revamp the original planning program adopted in 1925.

GEOGRAPHY STUDENT AND STAFF PARTICIPATION IN THE PLANNING PROJECT

During all these procedures, students enrolled in the department's course in Geographic Planning had the opportunity to observe how planning behavior functions in a democracy and how it can be made most effective when carried on at the grassroots level. As part of the class program, students prepared term papers on selected geographic phases of the Valparaiso planning project. Eight of these were subsequently published in abstract form as periodic feature articles in the city's local daily newspaper—the *Vidette Messenger*. The editor's own prefatory comments on these articles are worth noting: "With interest in civic planning at a new high locally, a series of papers written by students of Valparaiso University as a result of studies made here have been condensed for publication. Each deals with a different phase of planning in this community. The reports should offer local citizens a view of our town and county thru the eyes of an 'outsider' since all the students who worked on the project were from other parts of the nation."

The approval by the city administration of the CAPC recommendations now placed the new planning program on a legal and legislative basis. As president-elect of the new City Plan Commission and head of the Geography Department, the writer served as a sort of liaison agent in coordinating the technical work of the planning program itself and the administrative procedures involved in securing the adoption of the Master Plan.

The writer offered the services of the geography department in helping to realize the objectives of the CAPC. Professor Milferd H. Eggerding of the geography department consented to assist Col. Lawrence V. Sheridan, the Commission's consultant, in supervising the mapping of field data and in the drafting of maps. With

the aid of his students in Urban Field Survey and Rural Field Survey, the former Civilian Defense map was brought up to date, and a field survey was made of the physical-cultural features of the "rurban" area two miles beyond the city limits.

Large exhibit wall maps were prepared by Professor Eggerding depicting the geographic character of the community and illustrating the adaptability of planning principles and procedures to the geographic factors of the community. These maps were used by him in addressing neighborhood meetings, public hearings and sessions of the CAPC, the CPC and the City Common Council, to promote planning interest and intelligence on the part of both "town and gown." Professor Eggerding also regularly contributed to the meetings of the Plan Commission thru information and counseling on the progress of field and map work and planning procedures.

PUBLICATION OF THE VALPARAISO MASTER PLAN WITH A GEOGRAPHIC MOTIF

Upon completion of the planning project, a brochure was prepared on the Valparaiso Master Plan in which the geography department also directly participated. The brochure consists of 35 pages of text material, nine plates of maps and diagrams and double cover map.

Professor Eggerding closely collaborated with Mr. Sheridan, the planning consultant, in compiling and drafting the brochure maps and also assisted on some sections of the text, particularly the one dealing with neighborhood development.

The writer prepared the cover map and the preface.

To present as effectively as possible the principle of geographic correlation of cultural and physical features, as many of the relevant planning data as possible were represented in color on single maps (see Figs. 1, 3, 4).[2]

In addition to the conventional "zoning" map, geographic "neighborhood" maps (Figs. 3, 4) were designed with explanatory text material to help stimulate "regional" thinking concerning planning problems on a local neighborhood level as well as on a community level.

[2] Unfortunately, the maps here cannot be reproduced in color but some of the colored areas may be distinguished by the varying intensity of the dark areas.

The double-page cover map (Fig. 1) is intended to impress the Valparaiso citizenry with the idea that the Valparaiso Community is geographically a part of a larger community—the Calumet-Chicago region—and that its planning program must therefore be integrated with that of the larger region.

Nearly all the map composition work was done in the department's own cartography laboratory. Geography students assisted in preparing the brochure as well as the exhibit maps. With a background training in the department's course in Maps and Man and in Cartography and Graphics they found here an excellent opportunity to supplement their course training with new map-making experiences related to real situations of community life. Publication of the map-illustrated brochure gave tangible evidence of a lasting contribution to community welfare.

GEOGRAPHERS PARTICIPATE IN A REGIONAL PLANNING MEETING

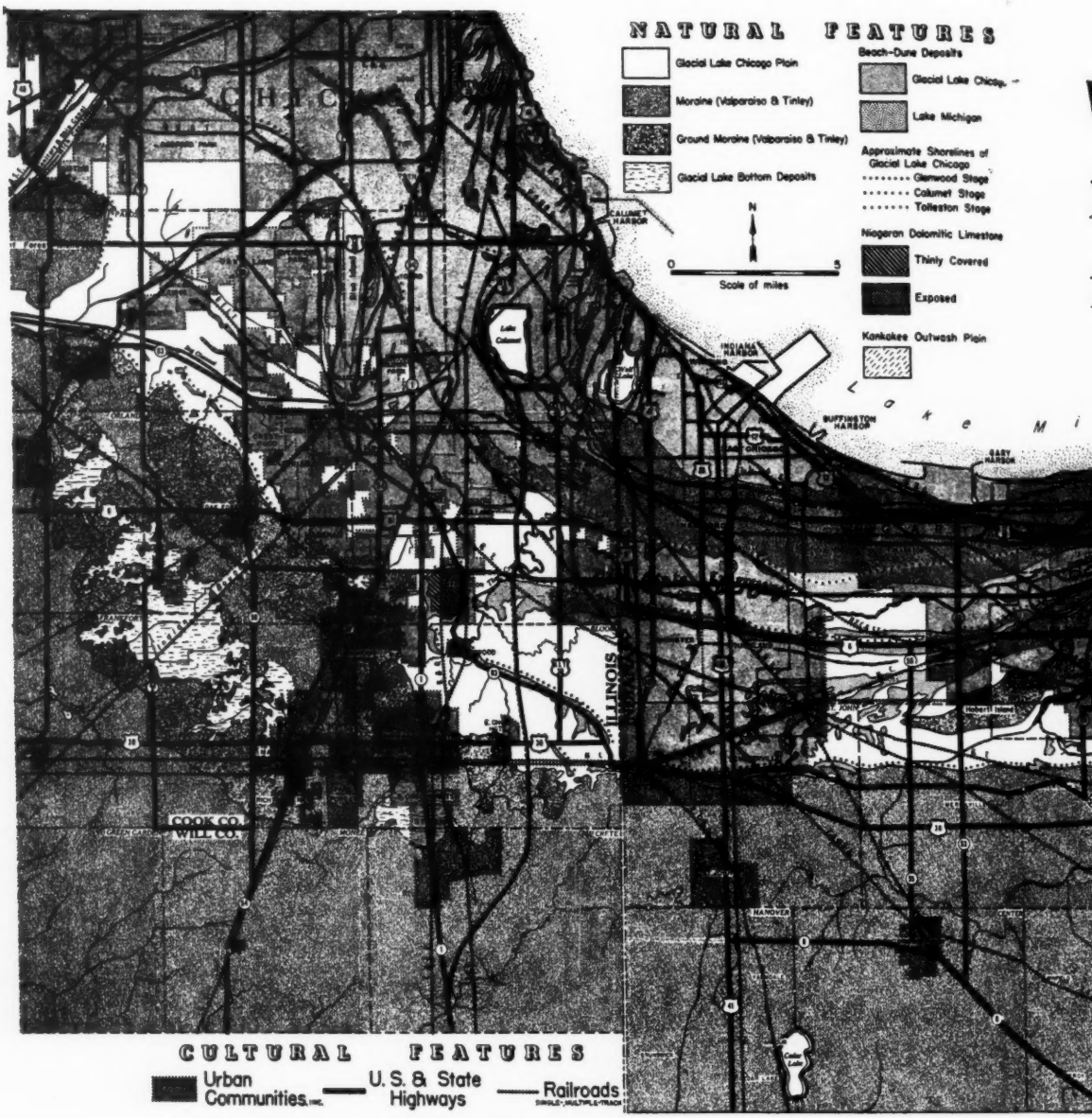
Publication of the Valparaiso Master Plan figured in the decision of the officials of the Chicago Regional Chapter of the American Institute of Planners to request Valparaiso University and the City Planning Commission jointly to sponsor their 1951 regional fall meeting. Both "town and gown" welcomed this opportunity. Dr. O. P. Kretzmann, President of the University, at once pro ceeded to appoint Professor Eggerding as the university representative to negotiate with Mr. Charles A. Blessing, President of the Chicago Regional Chapter, in arranging the program.

Students of the Valparaiso chapter of Gamma Theta Upsilon, national geographic fraternity, helped the staff prepare many of the planning exhibits shown at the local YMCA building.

The panel, symposium and clinic section of the program were concerned with implementing Valparaiso's future plans and integrating its plans with the other communities of the Calumet-Chicago region.

Here was the opportunity for the local students together with the citizenry to see how professional planners attack planning problems. Here also was the chance to observe that the planning field is a composite one calling for trained specialists with varying backgrounds.

Graduate students and staff members of the Geography Department of the University of Chicago were also in attendance, and observations made by the Chicago staff illustrated how specific



This Map is designed to show the Geographic Relationships of Valparaiso to Natural Features, Urban Communities, and Chief Transportation Routes of the CALUMET–CHICAGO REGION.

FIG. 1. This map, used as a cover of the broc
shows the site and size of the Valparaiso planning
tion to the basic landforms, circulation and urban
Calumet-Chicago region. (Original map in color)

cover of the brochure of the Valparaiso Master Plan, alparaiso planning jurisdiction and its geographic rela- lation and urban settlement patterns distinguishing the l map in color)

Fig. 2. The large scale Civilian Defense map (1: 1440) in the background here helps to point up some of the planning problems in Valparaiso to a group attending the regional planning institute sponsored by the Indiana Economic Council, Valparaiso University and the City Chamber of Commerce.

geographic points of view can help to orient our planning thinking. For example, it was pointed out that on port and seaway problems of the Calumet-Chicago region it is essential that we study them on a geographic (regional) basis instead of only or primarily on a political (state) basis.

A paper on the "Geographic Foundation of the Region" by the writer gave a regional perspective of the Calumet area in terms of its historical development.

The proceedings of the American Institute of Planners meeting were taperecorded and published in a 59-page brochure illustrated by the three colored maps of the Valparaiso Master Plan. The editing was done by Professor Eggerding, assisted by Professor John Strietelmeier, another member of the local geography staff.

Other Local Geography Planning Activities

A program so comprehensive and coordinative of our social, economic and political life as community planning opens many a door to academic and public participation. Besides those already

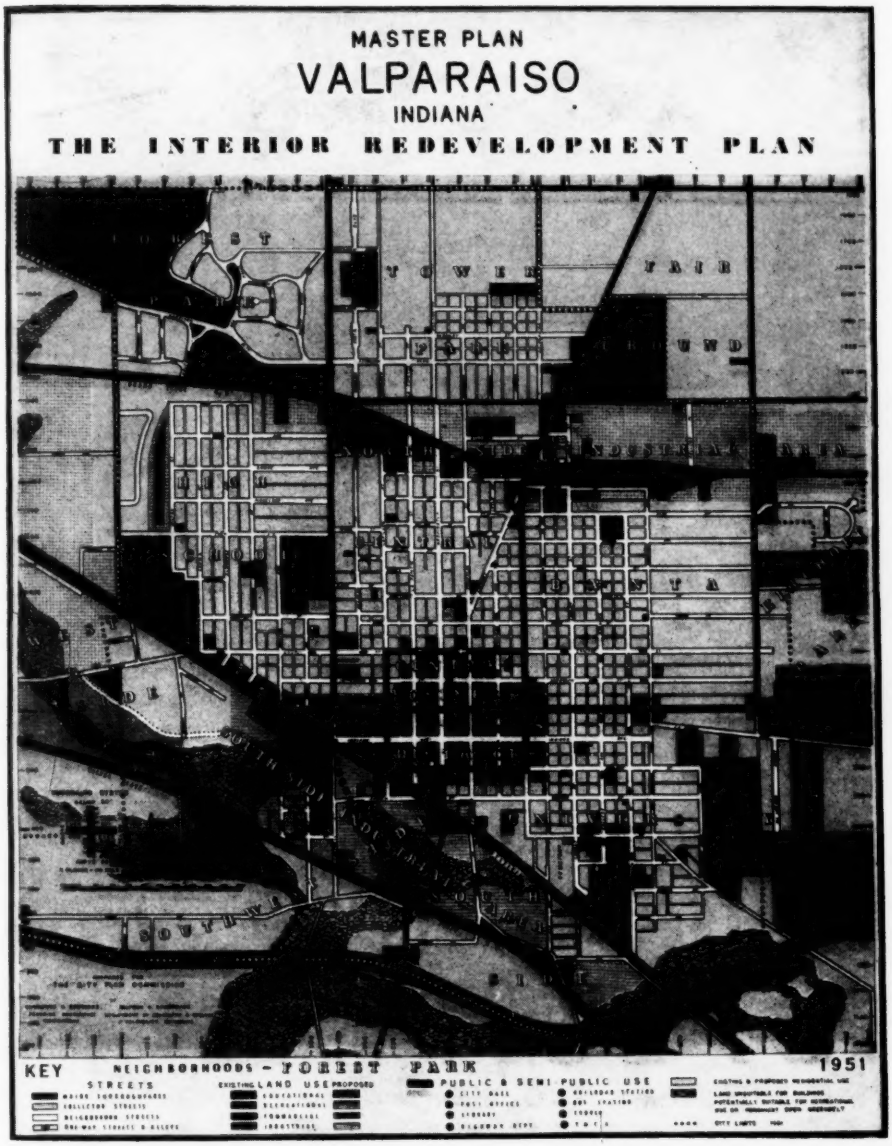


FIG. 3. Interior city sections of a community already built up do not readily lend themselves to extensive replanning. On the other hand, the established land-use patterns facilitate the recognition and delineation of "neighborhood" districts each distinguishable by its own structure and functions to which a redevelopment plan may be "regionally" applied. The map also features the geographic relationships of the proposed land-use patterns to the existing land-use patterns. (Original map in color)

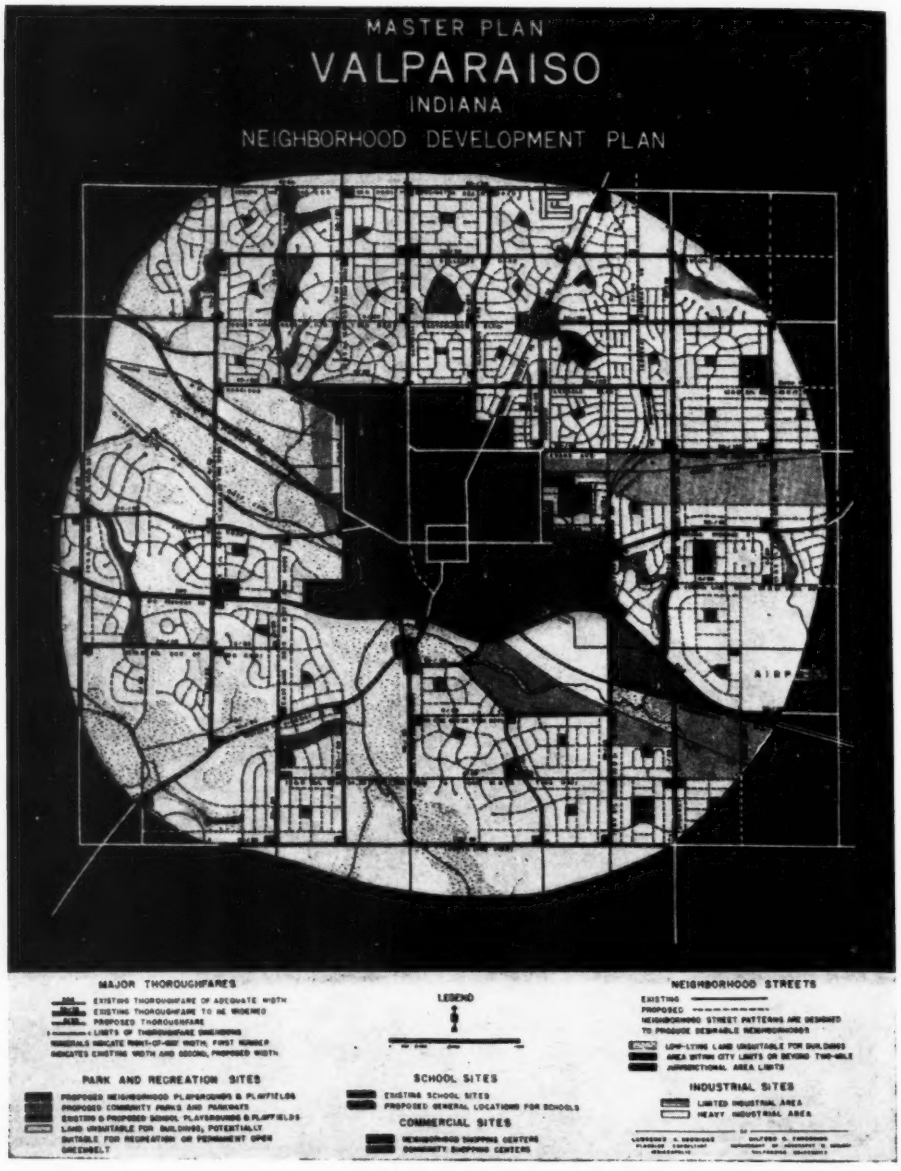


FIG. 4. Like the planning of the city itself (Fig. 3), the planning of the periphery of Valparaiso is geographically based on the "neighborhood" principle, even though the "neighborhoods" here are in the undeveloped state. Proposed neighborhood playgrounds, school sites, shopping centers and streets, bounded generally by thru thorofares, identify the neighborhood districts. (Original map in color)

mentioned above, geography students and staff members of the local chapter of Pi Gamma Mu, national social science honorary society, collaborated with student and staff members of other social science departments in the university in promoting an entire semester's symposium on Community Planning. Each social science subject area contributed its part. Speakers, prominent in planning and political activities, were also brought into the program.

Public contacts in addition to those already mentioned, have been of several types:

Three students and two staff members of the geography department made a taperecording for the Public Relations Department of the university to show how planning principles and procedures can operate in a community on a joint "town and gown" basis.

The geography staff has on various occasions participated in outside regional and local planning programs (Fig. 2).

The class in Rural Field Survey recently was employed on an inventory mapping project for one of the northwest Indiana counties. Participation in another county planning project is in prospect.

SUMMARY AND CONCLUSIONS

College Geography in Community Planning is an educational program richly productive of *functional* academic, professional and social experiences.

On the part of the student, it develops a spirit of good citizenship as well as scholarship by combining community with classroom activities.

To the community directly served by such a program, it is a fine gesture in cultivating wholesome "town-gown" relationships.

For the field of geography it engenders the kind of *academic esteem* and *public support* so badly needed to put geographic curricular offerings and professional geography teaching and research in the American school system on a sound instructional basis.

For the geographers themselves, it serves as a sort of clinic whereby geographic theories may be tested in the field. At the same time it affords a most excellent opportunity to collaborate with professional planners of various academic backgrounds.

Specific Academic Values. The geographic planning program calls into play all the basic concepts which characterize the nature and methodology of geography.

It challenges the geographer, as perhaps few other activities

can, to test under actual field situations the validity of the *exploratory, genetic* and *remedial principles* developed in the classroom and in the laboratory.

Field work is motivated by taking on the atmosphere of *reality,* not only by providing experiences with the realities of the environment, but with the purposive reality of contributing to a program of direct concern and practical use to society.

A planning project is an excellent educational medium of coordinating and unifying instruction of related geography courses as was done in this project by students registered in Geographic Planning, Urban Field Survey, Rural Field Survey and Geographic Problems. Such a program also has an appeal to students majoring in disciplines other than geography.

Geographic planning trains the geography student so he can actually *do* something. Far from qualifying as a professional planner, the kind of field and laboratory assistance recounted in this program does indicate sufficient competence on the part of the student to render real planning service in one capacity or another. Moreover, such practical experiences with theoretical training may well point the way to an eventual professional career in planning.

Social, Economic and Political Considerations. In agreement with the principle that "Citizenship is not a thing to be memorized; it must be thought and lived," the planning program has been instrumental in bringing the student into public contact with every phase of the official administration of this program and the citizen's participation in it. Such experiences help to provide the kind of *civic leadership* needed in building our communities on a sound material and spiritual basis. Here, in common with the citizens of his college community, he has seen and heard the problems of community life discussed and decisions made in the public hearings and official meetings of the Valparaiso Citizens' Advisory Planning Council and the Valparaiso City Plan Commission. As a result, we may well expect the student to *transfer* to his own community many of the ideas generated thru these public contacts.

Thru class and community studies he is prepared to understand the true nature and significance of land-use and resource-use planning, whether on a local, regional or national level. He has been made conscious of *geographically maladjusted* living, working and playing conditions in the community, and senses the challenge

of meeting this problem thru community planning. Likewise, he is prepared to feel more keenly than ever that *conservation planning* on a regional and national scale is indispensable for our national security.

And finally, the student's own observation of local planning procedures and administration has convinced him that planning can be a distinctly democratic process, as opposed to the totalitarian system of regimentation of human affairs. In fact, he may well recognize that "*grass-roots*" planning is one of the most effective means of promoting intelligent and active citizen participation in governmental affairs.

AN EXCHANGE TEACHER'S YEAR IN GLOUCESTERSHIRE

ALVIRA DOWNEY
Grant Junior High School
Steubenville, Ohio

Every year since World War II about a hundred American teachers have the unique privilege of living in Britain and teaching in the British schools for a whole year. In 1950-1951 I was one of these fortunate ones.

It was my good fortune to be located in Gloucestershire near the picturesque Cotswold country where houses, barns, churches, other public buildings and even walls are made of native stone and seem to rise right up out of the landscape and to be a natural part of it. There too, as in other parts of Britain, the roads wander over hill and dale, as if bent more on showing off the scenery than in actually getting you anywhere.

ORGANIZATION AND PRESENTATION

I taught geography, a compulsory subject in British secondary schools, to 265 girls (approximately half the students) of a girls' grammar school. Forms (grades) one to four (roughly ages 11-15) have geography two 40-minute periods a week, and form five, which must take the "first examination" to qualify for possible university entrance, has geography three periods a week. In the sixth form geography may be taken as an elective.

Geography texts are small, as each child is supplied with an atlas. There is somewhat more emphasis on physical geography and less on man's activities than in American texts. Children study British Ordinance Survey maps and learn to draw sketch maps to show position and importance of key cities and major industrial areas. This training pays off because most adults I found could draw a legible sketch map to guide an inquiring visitor to his destination.

Because the children have atlases, and because teachers draw many sketch maps on the black boards, there is less dependence upon wall maps. Our school and others I visited had a few good wall maps, but they seemed well supplied with globes, projectors, epidiascopes and other equipment.

After the teachers in our department agreed upon the syllabus for each form, we were free to use whatever method of teaching we preferred. We were also free of class interruptions as no one entered classes unannounced except the head of the school. We did have visitors however; a girl doing "teaching practice," a teacher of geography from the Gold Coast, and H.M.I. (His Majesty's Inspectors!). We also had children from the continent who were visiting for a few weeks in homes of our students and attended classes with them. There were German children who came over for rehabilitation, Dutch children who had lost their fathers and French girls who came for language study.

Our geography club met "fortnightly" at noon. The programs included films or talks by visitors. In place of the yearly geography expedition, the club visited the Festival of Britain in London. Five busloads went from our school, the children taking their own lunches and being charged a nominal fee for transportation. Careful preparation was made for the trip and the girls were provided with sketch maps of the route to and from London and of the Festival grounds with their exhibits, a number of which had direct bearing on geography.

Our school year was divided into three terms with long holidays of two and one-half to three weeks at Christmas and Easter, and two half term holidays of one week each. The summer term ended July 27. I thought I should mind teaching in summer but the weather was so delightful (compared with the cold, rainy autumn and winter in Britain, or with our own hot Ohio summers) that this was the most enjoyable term.

EXAMINATIONS AND TESTS

University entrance examinations for upper forms were followed in late June by the school exams and we had a week to "invigilate" them and grade papers before classes began again. Essay type questions are preferred and the children do remarkably well with them. Needless to say, they are difficult to mark. Teachers make out their own examinations for the four lower forms and a choice of questions is generally given. British children often supply startling information on test papers just as American children do. One first form child explained that if you stand with your back to the mouth of a river you will find the left bank located on the right hand side. A third form girl wrote, "Mink, ermine, fox, otter, and moose are trapped in Canada. Chinooks are the most important animals trapped. Another important Canadian animal is the cariboose."

Paper (supplied by the school) and chalk were in short supply. Ordinary tests were taken on "rough paper" (scrap paper from the office). Home work was done in composition books and teachers of academic subjects spent long hours at school marking these books as they were too bulky to carry home (few staff members owned cars). Mechanical pencil sharpeners were non-existent. One day in "prep" (study hall), I gave a girl permission to sharpen her pencil. When she walked to the front of the room and pulled out a knife I almost fell off the chair. I had thought the day of pencil whittlers was over.

PROBLEMS OF AN AMERICAN TEACHER

There were certain problems that we faced as American teachers trying to live in Britain for a year. The chief problem was the cold. British homes are heated by fireplaces and coal is strictly rationed. We were lucky if we had a small electric or gas heater in our bedrooms. Bathrooms were generally without heat. I taught in a modern school building with central heating, but in winter they heated the building to 53° F. and then opened the windows so the rooms wouldn't get "stuffy." We learned to wear while teaching heavy Scottish woolens, leather jackets and fleece lined boots. And in Ohio, my exchange was near fainting with classroom temperatures at 72°.

Our second problem was the language. We think we speak the English language, but the British aren't so sure of it. Most of the students had attended the "cinema" enough to get used to an

American accent, and I did try to use the British pronunciation of certain words used in geography, such as "aluminium," "geyser" and "glacier," and to adopt the British spelling of words like "colour," "harbour," "plateaux," etc. I needed to accustom my ears to "whilst" and "amongst" and to learn the meaning of time table (schedule), revise (review), tick (check), sleepers (railroad ties), lorries (trucks), trucks (freight cars), diversion (detour), road metal (stone for road building), etc.

A third problem was food. Meats, eggs, cheese, fats, tea and sugar were rationed but low in price. Certain frozen and imported foods were obtainable but expensive. We could buy frozen pork chops from the Netherlands, canned "franks" from Germany, soups from Uruguay, cranberries from Czechoslovakia and citrus fruits from Spain and Palestine. Vegetables and hardy fruits, of course, were chiefly British grown. Evesham plums and Kent cherries were delicious.

We found the British doing without many things that we take for granted, e.g., refrigerators, window screens, new cars and their own bone china (they can buy plain white china or export rejects). But on the positive side the British have many things and life among them was good. There are few billboards so that most of the countryside and the towns still have an unspoiled look. There are paths for cyclists and for pedestrians besides the roads and we found walking, riding or even hitch hiking a real pleasure. We liked the uninterrupted radio programs. Europeans can't understand why we endure commercials.

I think we Americans were most impressed with the quality of the British people, their intelligence, their patience and self control in difficult situations and their unfailing courtesy. Nobody blows his horn when the light turns green and you are slow in starting. No customs official yells, "Aliens out of line. This line for citizens only," as they do in New York. Instead, they may ask if you carry a foreign passport or are a "non resident." We found we had much to learn from the British and other Europeans. They made us realize again that "A man's life consisteth not in the abundance of things that he possesseth."

ALLUSIONS TO CORN IN MEXICAN TOPONOMY

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Corn is the "staff of life" in the Mexican diet. It is that nation's most important crop and chief food.[1] The majority of the Mexican people depend to a large extent upon corn.[2] At the same time, over half of the farm land in Mexico is planted to corn.[3]

The crucial role of corn in Mexican life is reflected clearly in the place names (toponomy) of this nation. This reflection can be considered in terms of several word constellations into which place names regarding corn tend to fall.

First, topographic features are not infrequently linked with place names involving corn: for example, Centepetl (hill of corn); Yautepec (hill of black corn); Lachixova (plain of corn); Acamilixtlahuacan (field [plain] of planted corn); Tlaxaltepec (tortilla [corn pancake] hill); Olotepec (ear corn hill); Niltepec or Miltepec (cornfield hill) and Tepetzintla (on the skirt of cornfield hill).

Second, other toponyms involving corn stress its abundance, suggesting, via converse reasoning, that scarcities were a matter of concern to those responsible for naming Mexican places. Illustrative of this group are: Miahuatlan (where maize flowers abound); Tlaxcala (near bread [so named because of maize abundance in this place]); Tayoltita (place where there is much corn); Elota (place of much tender maize); Chinantla (Chinantlan), or Chinamitlan (place of abundant fenced in corn fields); Ohuapan (where much maize planting takes place); Nochistlan (where grain abounds).

Third, other corn place names in Mexico connote certain inherent characteristics in the product, such as: Xilotzinco (place of small maize ears); Jilotlan (place of tender mazorcas); Yauquemechcan (where they plant black corn); Isguatan or Izhuatlan (place of green corn leaves); Yulusuchil or Yiloxochitl (tender maize flower); Oacalco (where there are green corn stalks); Ixhuatepec (green corn leaves).

[1] George T. Renner, et al., *World Economic Geography* (New York: Crowell, 1951), 202.

[2] J. Russell Smith and M. Ogden Phillips, *Industrial and Commercial Geography* (New York: Holt, 1946), 450.

[3] William Lytle Schurz, *Latin America* (New York: Dutton, 1949), 163. It is of interest to note that the Mayas were perhaps among the first people to domesticate the wild grain and to initiate the cultivation of maize. (See Preston E. James, *Latin America* (New York: Odyssey, 1942), 10.)

A fourth constellation of toponyms is marked by imageries related to processing corn: Zaczacuala (corn or wheat bins); Pinola (a kind of toasted maize); Acuezcomac (Cuezcomatl or Coscomate, referring to a small maize bin in Indian patios used for keeping corn); Tezates (refers to the water with which a metate [corn grinding instrument] is washed after being used to make masses of corn mix)[4]; Botidi (planting or planting place); Tamacapan (place of tortillas [corn cakes]); Izquitla (place of toasted maize); Tlaoyaloyan (place where corn is shucked); Cuezcomahuacan (where there are granaries); Icecoayan (where corn is toasted) and Tlaolla (place of shucked corn). Planting is also indicated in Tlaulmilpa (where maize is planted). Similarly, speed of growth is indicated in Tetepilco (where corn is produced quickly).

A fifth possible grouping of corn toponyms is according to references to flowers, showing an emphasis on the "growth" aspect: Michuichan (in the home of those who have maize flowers) or Miahuacan (flower of maize cane).

A sixth group consists of simple allusions to maize or corn fields: Amilcingo (in the little irrigated fields of corn); Amilpa (in the watered corn fields); Amixtlan (beyond the corn field); Huimilpan (in the big corn fields); Huachinamil (place of cornfield canes); Timilpan (water of [for?] corn); Bachigualato (maize lands); Bachimeto (maize fields); Guazaveri (isolated field of corn); Anageintha (planted corn field) and Milnepantla (in the midst of planted corn fields).

A final miscellaneous classification of corn toponyms consists of diverse references to this vital food product in Mexico: Tlaollan (place of husked and dried maize); Xilotepec (in the mountain of maize ears); Bachiniva (where they have maize); Centipac (over maize); Huaniquea (where maize is handled); Loxuva (place of maize); Tlaola (grained maize); Ximilpa (at the foot of the corn field); Enshuigre (maize whiskers [*barba*]); Atocpan (on fertile [corn] land)[5]; Cenizuac (place of corn leaves); Centla (place of maize mazorcas).

From this varied array of Mexican place names involving corn, it would appear safe to assume that corn or maize has played a

[4] This is according to the view of Señor Olaguibel, who is often referred to in Mexican toponomic works. (See, for example, Cecilio A. Robelo, *Nombres geográficos indígenas del Estado de México* . . . (Cuernavaca: Miranda, 1900).

[5] See Antonio Peñafiel, *Nombres geográficos de México* (Mexico: Secretaría de Fomento, 1885), 62.

major role in determining the course of this civilization. Yet it is not entirely necessary to couch this observation in the form of an assumption, since it has been repeated so often by historians, geographers and sociologists familiar with the Mexican scene. Cases in point are the views of Smith, Schurz and James, mentioned at the outset. The corn toponyms indicated in this note are suggestive of the range, but far from exhaustive on the subject.

GEOPOLITICS AS HAUSHOFER TAUGHT IT*

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This summary is based on some of Professor Haushofer's articles written in German, on my own lecture notes and in a few places it is supported by my memory. English language writings, such as Spykman, Weigert and Walsh have been used only for verification. My remarks—as the title indicates—do not necessarily show my own views, since as a former student of Haushofer I am somehow a follower of geopolitics. (I assume that you are familiar with the basic concepts of geopolitics such as space organism, heartland, core area, pivot area, rimland, etc.)

Karl Haushofer, general and professor in Munich, Germany, taught geopolitics as the science of *space* as it influences all human activities, SPACE spelled in capital letters. To him all historic development is mankind's struggle for space. All research, therefore, ought to begin with space, the least changed and least changeable factor affecting man. While history forgets the stage of the actor, geopolitics repairs this by putting the stage into the foreground.

Organized occupance of land—and of sea—space, nomadic and sedentary, is much older than history assumes and is based on anthropological instincts. It is the restless versus the settled type and Haushofer is convinced that even in our urbanized society this instinct is still strongest in forming personalites and cultures. What we know about the Nile delta and Mesopotamia, about the Hwang Ho and the Punjab, about the plateaus of Central America

* This paper was read at the sixth annual meeting of the California Council of Geography Teachers, held May 3, 1952 at Fresno State College.

is only the more recent stage of renewed rise preceded by older rising and declining space occupance.

All civilization then—as Haushofer explains—is based on space concepts. Hellenism results from the Agean Sea and Islam from the desert, and in our modern society Anglo Saxon (United States and Britain) occupance is ocean born while U.S.S.R. occupance is steppe born. Haushofer speaks as early as the 1930's of the two *space giants* (United States-Britain = ocean and U.S.S.R. = steppe), while river settlements, highland nations, etc. are space midgets on their way out in the airage.

Rim empires such as the Roman around the Mediterranean Sea ("a space exaggeration by nationalism"), the Turkish around the Black Sea, the Baltic empires and even the British rule of the Indian Ocean have no space basis and therefore cannot last. "Fleets cannot hold a hinterland." The British realized this when they moved their Indian capital from Calcutta to Delhi. Each state's development depends then on its good or bad, on its smaller or larger share (space) in the geos. The constant redistribution of these shares is the very essence of history.

Space always conquers the conquering man. Russia became Asian and France became African, even Christianity became a Central European rather than a Near East religion. Haushofer stresses one exception to this rule, Caesar mediterranianized the Nordic Gallia. The United States had to expand from coast to coast in accordance with the ocean-island concept, while Germany expanded according to the central plains idea. Haushofer applies the same space laws also to more detailed events. Napoleon was defeated by the Russian space factors, steppe and climate. Already east of the Oder, the French soldier found himself in a strange land, hostile climate, etc. Modern applications of this would be the struggle of United States divisions against climate and terrain in North Korea and Ridgeway's decision that we do not need to extend our "real estate" holdings. Haushofer, in a personal conversation with me shortly after VE Day, put Hitler's Stalingrad campaign into the same category, "complete disregard of space factors," and I might add that here is a lesson to the men responsible for military training in our country. In case of an attack on us, obviously the Soviets would call the space and the time. They seem to be students of geopolitics in following the principle of their absolute advantage, training their troops in snow and ice and in winter offensives. (It should be noted that our most Northern area is the equivalent to the U.S.S.R.'s Southern boundary!)

BLOOD AND SOIL

In the Germanic slogan "blood and soil" the Munich professor underlines the *and*. To him again this is the coordination of man (blood) and space (soil). Space conquest is limited by blood. The Germanic conquerors of Rome, Spain and Africa overstepped their space limits and disappeared. Haushofer, however, never said what the space limit of the modern Germans was. The white man's occupance of North America, he explains, was *within* space limits. Since the native Indians of our area never did reach the coordination stage of space and man, this was a virgin area and therefore open to occupance. South American conquest on the other hand had to be a compromise with already coordinated native states, hence Mestizo America.

A well coordinated space organism can never be destroyed, and Haushofer, who enjoyed Japanese admiration and hospitality for many years, names fondly Japan as the best example for it. Least coordinated organisma, geopolitical misfits, to him are the Near East and India. Already in the 1930's he speaks of the necessity of a partition of Palestine and of Kashmir, Hyderabad and the Bombay area as trouble spots of India. It goes without saying that to him, the German general, the Polish corridor was a geopolitical outrage and in a seminar I attended he predicted many times that in the corridor area a new war would break out.

Karl Haushofer always was fascinated by the *Pan* ideas, to him they are the greatest coordinations of man and space, new dynamic geopolitics. *Pan America* under United States leadership is, he admitted, nearest to realization. *Pan Europe* is the least likely space organism. While *Pan Monsoonia,* with a stable core in Japan and with an unstable core in India, to him, is the greatest possible coordination of man and space.

CORES AND HOTSPOTS

Best coordinates are the *cores* and poorest coordinations are the *hotspots* of the geos. Haushofer names a whole ring of cores; foremost Japan, next England, but also a North American core between St. Lawrence and the Gulf, which, as he declared 15 years ago, is slowly moving westward. Space importance can change according to changing transportation, etc. Istanbul changed from a core to a rim area, while Berlin advanced from a rim to a core area. Washington, D.C., Canberra, Rio, etc. are artificial and therefore nonfunctioning cores. A state reaches from core to rim and the state

boundaries are like a skin holding the space-man organism together. Boundary regions are within the skins and are therefore part of the organism. They are front areas, and very often need "blood transfusion" from the hinterland for the maintenance of "defense blood pressure." The problem of habitability of boundary lands is a problem of space limits, and marginal boundaries are usually lost if an attack comes. (Our present concern over Alaska ought to be an excellent example for applied geopolitics.) Subdivisions within a state organism should be organic also. Again Haushofer feels that the United States, especially in drawing boundaries for the western states, is ahead of Germany, whose boundaries of southern states (of Napoleonic days) are geopolitically unsound. This by the way is being remedied by the government of West Germany.

To Haushofer, a world status quo involving a world pacifism is neither possible nor desirable. Geopolitics is the science of a dynamic, constantly changing world. At present, he says, there are too many overcrowded areas versus politically occupied, but actually empty spaces. That means leaving starving people next to "filled barns." "Only the white man is a pacifist." This, of course, is the often repeated German slogan of "people without living space" and of the "have against the have not nations."

Influence of Haushofer Geopolitics

Haushofer, integrating the teaching of Ratzel, Penck, Kjellén and Mackinder, probably did develop a geopolitics which was adaptable to German military planning and especially to Hitler's conquests. He started out as a German general and his relations to the one time second ranking Nazi leader, Rudolf Hess (his Rudi), are well known. His German friends and students made more use of the "Herr General" than of the "Herr Professor." Yet his teachings must have a strong appeal to military men beyond Germany. All Japanese planning before and for World War II (including the attack on Pearl Harbor) shows Haushofer's influence. The present map of Europe, especially of the Russian-Polish-German space, is exactly the map of Haushofer's pivot area and even the English dilemma between a United Europe, and her overseas responsibilities fits into Haushofer's thesis. NATO, the United States position in the Pacific, China as an ally of Russia, to all this Haushofer could have said with a great deal of justifica-

tion, "I told you so." His geopolitics is application of space laws to political decision. It remains to be seen how his prediction of a Prussian-Russian partnership in space materializes. (He is convinced, however, that German culture could never be subdued by Eastern culture, even in a partnership.) It seems to me that even in Arnold Toynbee's *Study of History* many similarities with Haushofer can be found. This of course could also mean that a geopolitical interpretation of world events is closer to the European than to the American mind.

Yet can we in the United States with our tremendous world responsibilities afford to disregard this "science of space" of the man from Munich?

GEOGRAPHICAL PUBLICATIONS

Abridged Elementary School Atlas, H91, by L. Philip Denoyer, Denoyer-Geppert Company, 5235 Ravenswood Avenue, Chicago 40, Ill., 1952. xxiv pages with 16 maps. 60 cents.

One reads in the preface of this work that "It is the purpose of this abridged elementary school atlas to present a few maps that will be helpful to teachers and pupils in elementary and secondary schools. . . ." The value is to be found in the use of this volume with current textbooks in the Social Studies which do not have adequate maps showing location of places discussed.

A valuable aid to many users, especially those without preparation in geography and map reading, is the discussion entitled "Reading the Map." This introductory material, written in very simple style and presenting nineteen illustrative figures, covers such topics as "Colors, Relief or Elevation, Scale, Latitude and Longitude, Direction, Symbols Used on Maps, Map Projections."

Another aid to the person lacking the proper foundation is the "Short Study of Each Map." This is a discussion of the geographic relationships which may be deduced from a knowledge of the map together with pertinent questions relating to the map.

Twelve of the maps, constituting the majority of those given, are physical-political. Six of these cover North America and the United States by sections, the other six treating other continents and major countries. Two maps give the population density of the World and United States. One is a political map of the Pacific Ocean and one is a World Commercial.

The format, 9 x 11 inches, renders this a convenient book on the student's desk. Another commendable feature is the excellent execution of the maps, including color, accuracy, lack of crowding of detail, explanatory legend and legible type.

This atlas should be useful for those wanting a simple but well-constructed reference. It is probably most useful for those children beginning the study of geography or the social studies.

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NATIONAL COUNCIL AT WORK

An organization must have vision or it will die. The National Council of Geography Teachers has many committees which are all working toward more and better geography in the years to come, but there are four committees whose responsibilities and efforts might well be pointed out now for more careful analysis and whole-hearted support. They look to the future.

1. **Committee on Research in Geographic Education.** Chairman, Herbert H. Gross, Concordia Teachers College, River Forest, Illinois. Other members, Dr. V. Calvon McKim, Miss Adah Flemington, Miss Eleanor Wiegand, Miss Carol Brumby. Altho this committee will not complete its project until 1955, it is doing a big job. It needs your assistance to keep all geography teachers aware of what is happening on the frontiers.

2. **Committee on Television.** Chairman, Dr. Mildred Danklefsen, Western Reserve University, Cleveland, Ohio. Other members, Eleanor Hanlon, Dr. Ruth E. Baugh. Educationally, television is a medium largely untouched. The field of geography is a "natural." The committee is working now along several lines: a listing the geographers now active in T.V. work; b. finding the channels already sending geography and c. planning their procedures to obtain best results from this medium. This committee needs enlargement. Shortly this will be done.

3. **Committee on the Promotion of International Understanding.** Chairman, Dr. Norman Carls, 3605 Greenway Place, Alexandria, Virginia. Other members, Dr. Clyde Kohn, Dr. Zoe Thralls, Dr. Henry J. Warman. This committee looks to the present and to the future. It is exploring "Point 4" programs, film availability, closer relations with Pan American organizations, UNESCO and our State Department. The improvement in teaching materials and better teaching also are considered to a degree.

4. **The Planning Committee.** Chairman, Dr. Zoe Thralls, Department of Geography, University of Pittsburgh, Pittsburgh, Pennsylvania. Other members, Dr. Earl B. Shaw, Dr. Loyal Durand, Jr., Dr. Thomas F. Barton. This is, as the name implies, the National Council of Geography Teachers main "committee with a view to the future." At present it is either recommending or exploring plans for such projects as geographic education in the elementary school, resource use education and reorganization of certain council activities so as to assure more efficient action and meaningful results. This committee keeps under surveillance the many project committees of the Council, stays abreast of their findings, appointments and report "deadlines."

The above committees epitomize four important main phases of the National Council at Work with the future uppermost in mind. Research in all geography education phases, new media for disseminating geography, the much needed worldwide viewpoint and a functioning group alert to the above and the many ramifications of the Council's work—all these are represented above.

Plans are shaping up nicely for the joint meeting of the National Council of Geography Teachers and the National Council for the Social Studies November 27, 28 at the Statler Hotel, Buffalo, New York. Geography Co-Chairmen of the Buffalo, New York Local Arrangements Committee are Dr. Katheryne Thomas Whittemore, State University of New York, College for Teachers, Buffalo, New York, and Mr. Gabriel Betz, University of Buffalo. They are cooperating with Dr. Frank Dressler, Supervisor of Social Studies, Board of Education, City Hall, Buffalo, New York.

Preliminary plans also are taking form for the West Coast meeting of the Geographers in August, 1954. In near future issues of the JOURNAL OF GEOGRAPHY details will be given. Jot down the dates.

Institutions, State Councils and other groups intending to hold breakfast meetings should notify me at once if they care to have a notice in the printed program.

HENRY J. WARMAN, *President*

GEOGRAPHICAL PUBLICATIONS

A Handbook of Suggestions on the Teaching of Geography, UNESCO, Paris, 1952. 104 pages. $0.75. 6 photographs, 2 maps. (Available for distribution, Columbia University Press, 2960 Boradway, New York 27.)

The author, Mr. N. V. Scarfe, states in the foreward that this handbook is designed to complement "Some Suggestions on the Teaching of Geography" which was one of the working papers of the 1950 UNESCO Seminar on the Teaching of Geography. The contents of this book is focused on how the student can develop world understanding thru geography. It is addressed to teachers at the primary and secondary levels, to curriculum consultants, and school administrators who should be vitally concerned over the geographical illiteracy of students and citizens. Altho this book is limited to the consideration of the value of geography in teaching international understanding it treats geography as a part of educational curriculum as a whole and in relation to the other branches of knowledge.

It is most significant that this book is an organized report of research done in the field of geography teaching by leading authorities in many countries. Behaviors, attitudes, ideals, ideas, skills, and understandings which effective teaching of geography develops in each individual have been outlined concisely. Brief psychological considerations necessary in the choosing of geographic content for syllabuses and teaching methods are a special contribution to educational research should have the attention of social studies curriculum planners.

A chapter on Aids in Teaching is packed with practical suggestions for teachers at all levels. There are helpful suggestions for outdoor study and field trips in the real landscape. The use of photographs, selection of films and the use of visual aids are presented with examples. The selection and use of globes, maps, and diagrams are treated at length. Minimum essentials for maps and globes at different grade levels are outlined. The attention of every visual aid consultant should be directed to this chapter.

Equipment necessary in a geography laboratory is listed. This section of the book might well be used as a criteria for the purchase of equipment for the geography classroom. It should have the attention of school architects and administrators.

The section devoted to the education and training of teachers should receive serious consideration by professional standards and teacher certification committees, especially since the recommendations are those of outstanding international leaders in the field of the teaching of geography.

The bibliography is international in scope and carries some of the best sources on the teaching of geography from a number of countries.

It should be emphasized again that the contents of this book as compiled by Mr. Scarfe, represents the best research and practices as presented in the UNESCO Seminar for the Teaching of Geography. It has been organized in the following chapters: I. Geography and International Understanding, II. Some Suggestions on Syllabuses and Teaching Methods, III. Aids in Teaching, IV. Conclusions, and Appendices: A. Examinations, B. The Education and Training of Teachers, C. The Geography Room, D. Documentation for Teachers, and E. Bibliography.

This handbook should be on the desk of every geography and social studies teacher and receive the attention of all who are engaged in curriculum planning.

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J. E. Spencer, **Land and People in the Philippines.** University of California Press, Berkeley and Los Angeles, 1952. XVIII and 248 pages, 17 maps, 18 tables, 32 illustrations, index, bibliography, $4.50.

Published under the auspices of the Institute of Pacific Relations, this book "deals with selected aspects of the rural background of the Filipinos in an effort to understand more clearly some of their current difficulties." Its nineteen chapters are really a series of essays, each of which can be read independently of the others and which collectively make up a very readable book on rural life in the Philippines. Representative chapter titles are: "Basic Structure of the Economy"; "Population Growth and Standards of Living"; "Transportation in the Hinterlands"; "Internal Colonization"; "Irrigation and its Problems"; "The Problem of Rural Health"; and "Government Services in the Hinterlands."

The last two chapters, "Summing Up the Rural Scene" and "The Elements of a Program" are especially timely. They attempt to assess the overall situation of the national economy and then briefly suggest several remedial measures for improvement of present conditions.

Dr. Spencer, an authority on the geography of the Far East, is one of the few scientists to travel extensively in all parts of the Philippines in recent years. His observations and interpretations reflect both his Philippine travels and his intimate knowledge of other areas in the Orient. The author points out zones of American failure and areas of weakness or failure within the present Philippine organization. He describes the current portrait and its attendant problems, then indicates the lines along which reform, experiment and development must focus if the lot of the rural Filipino is to be materially improved.

The text is documented with 177 references, placed at the end of the book, and each of the 32 pictures is an excellent photograph of a rural scene, ranging in locale from Mountain province in Northern Luzon to Zamboanga and Davao on Southern Mindanao. The maps are well-done, altho the crop maps (pages 62 and 63) are printed four on each page and hence are so small that their usefulness is impaired, and the identification map (page 16) incorrectly indicates the capitals of Mountain and Zamboanga Provinces as Baguio and Zamboanga, rather than Bontoc and Dipolog.

Land and People in the Philippines is an excellent book. The author recognizes that heterogeneity is far more prevalent than unity and conformity. Hence, broad generalizations are avoided. Specific illustrations and carefully worded qualifications keep the text factually accurate, yet permit easy assimilation of the ideas expressed.

ALDEN CUTSHALL

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Hubbard, George D. **The Geography of Europe** (Second Edition). Appleton-Century-Crofts, Inc., New York, 1952. xviii and 870 pages. $6.75.

Nearly 15 years ago this reviewer used the first edition of Hubbard's text in teaching the geography of Europe. It is a pleasure to see this excellent work extensively revised and taking on a modern appearance. Legibility has been greatly improved by the use of a new type face and resetting the entire book; references following each chapter have been greatly expanded and brought down to date; maps and illustrations have been placed more conveniently for the reader. Photographs also have undergone considerable change, giving the student a more accurate conception of life in Europe than that gained from the earlier edition. Relatively few changes have been made in the maps, and unfortunately some of them lack scales.

This is one of the few texts that devotes a full chapter to Europe's pre-history.

I have found this particular chapter of great value in teaching the geography of Europe. The new edition contains added chapters on the results of changes stemming from both wars, and the regional geography of the Mediterranean Sea.

This volume is not entirely satisfactory for those colleges in which western Europe is given as one course and the Soviet Union is treated separately, since seven chapters are devoted to a discussion of Russia. Some instructors would prefer a more extended treatment of Germany. This book has always been regarded as encyclopedic, but in view of Europe's extensive political, cultural and economic material it seems almost impossible to avoid extreme detail. I regret that the new edition has abandoned the numbering of figures since the instructor often finds it necessary to make comparisons of the maps on different pages.

For those who have been using this text by Dr. Hubbard the new edition will be a welcome change and the author is to be complimented on the thoroness of treatment, the attractive appearance and the numerous down-to-date factual materials that make up this admirable volume.

H. F. RAUP

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John E. Kieffer, **Manual of Political Geography.** Denoyer-Geppert Company, Chicago, 1951. 72 pages, 1 frontispiece world map in color. 39 outline maps and table of contents. $2.50.

Manual of Political Geography is a workbook written for "use in courses in World Political Geography, World Economic Geography, Geopolitics, International Affairs and World Problems and Current World History". There are 32 exercises in the workbooks, 12 of which are studies on factors common to all states, 14 on studies on limited areas and 7 on studies on international political relationships. These exercises deal chiefly with those items that most readily lend themselves to graphic representation for which the large outline maps, most of them 10 x 14 inches, are well adapted.

The first exercise attempts to acquaint the student with conventional signs and used in the manual are shown on the inside of the front cover. They are for use in symbols and projections. All of the conventional signs and symbols which are to be completing the various map exercises.

All the remaining exercises follow the same pattern of approach. First, there is a statement of the object which may be simply expressed as "To demonstrate the relation of these national resources and finished products to political power and development" or more complexly expressed as "Part A. To demonstrate the strategic air base theory which postulates the control of the world by air power. Part B. To demonstrate the strategic bottlenecks and naval bases essential to world control. Part C. To demonstrate the critical areas and world 'hot spots'." Secondly, there follows a statement relative to the materials to be used which are usually outline maps in the manual, maps in atlases and/or wall maps. Next, the texts and references which are books dealing generally with the elements of world political and economic geography and with geopolitical principles are listed. Following are the directions to the student which are designed generally to bring about the most effective use of the outline maps. Finally, there are a number of questions, usually 10, relating to each unit of study. Unfortunately only a few are thought-provoking.

The manual is a valuable contribution as a workbook on world political geography and related courses and will be a useful text for all teachers and students of the subject.

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Samuel Van Valkenberg and Colbert C. Held. **Europe** (Second edition). John Wiley & Sons, Inc., New York, 1952. 826 pages with illustrations. $7.50.

The first part of the book presents an overview of Europe's physical landscape and an interpretation of the cultural, economic and political pattern interposed on this landscape. As in the first edition, climate gets high rating in helping explain this development. The sequence of changes that have preceded the pattern are of special value, especially to those prone to interpret everything in terms of the present.

Regional aspects of each country are presented; not as isolated entities, but related to that part of Europe to which each region belongs by way of culture, trade and political ties, as well as to the unity of Europe as a whole. The serious problems resulting from war and the Iron Curtain are recognized, but not stressed unduly. The reader is not left without hope for the new Europe that is emerging and which will, as in the past, contribute culturally to the world, altho its former political leadership in world affairs may be lost. Each author, especially the senior author, has had numerous personal contacts with the areas and peoples of Europe. All the countries of Western Europe have been visited by them since World War II ended.

The detailed information makes the book not only useful as a college text but also as an invaluable aid to anyone anxious to understand Europe better. It is excellent background material, too, for anyone contemplating a visit to Europe.

The bibliography lists recent publications that are particularly useful supplementary reading for each chapter, along with the best yearbooks and publications that serve as guides to other bibliographical listings. The appendix gives the area and the latest available population statistics for each country and its largest cities.

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W. R. Philipson. **The Immaculate Forest.** Philosophical Library, New York, 1952. 223 pages, illustrated. $4.50.

The geographer who is interested in field work in the tropical forests of South America well might turn for orientation to *The Immacuate Forest*. This book describes with remarkable detail the problems of exploring an unmapped and uninhabited maze of narrow ridges and deep forested valleys in the tropics.

Dr. Philipson, a naturalist of the British Museum, and his scientific team explored the Macarena Mountains which lie several hundred miles southeast of Bogota, Colombia, between the inner slopes of the Andes and the headwaters of the Amazon. The objectives of this expedition were the collection of rare plant and animal specimens and the correlation of the peculiar plant life of the region with that found on other mountain remnants in Venezuela and the Guianas.

Writers of regional geography often fail to transmit to readers their feeling for and understanding of a region. This is not the case of Dr. Philipson. His intimate description of flowering plants evokes easy visualization. Epiphytic plants and the discovery of new plant species are two very interesting topics of the narrative.

The geographer might wish for a broader discussion of the interrelationships between various physical elements of the tropical forest. The uninhabited nature of the Macarenas goes largely unexplained, altho the expedition was able to sustain itself largely on abundant small animal life.

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